

REMARKS:

Claims 1-7, 9-16, 18-25, and 27-30 are currently pending in the subject Application.

Claims 8, 17, and 26 have been previously canceled without *prejudice*.

Claims 1-7, 9-16, 18-25, and 27-30 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,219,649 to Jameson (hereinafter “*Jameson*”) in view of U.S. Patent Publication No. 20020049759 to Christensen (hereinafter “*Christensen*”).

Applicants note with thanks the Examiner’s response of 19 June 2009. Applicants further note with thanks, the Examiner’s withdrawal of *Supply Chain Management: Strategy, Planning, and Operation*, Prentice Hall, October 2000, by *Chopra et al.* as prior art against Claims 28-30.

Applicants respectfully submit that all of Applicants arguments and amendments are without *prejudice* or *disclaimer*. In addition, Applicants have merely discussed example distinctions from the cited prior art. Other distinctions may exist, and as such, Applicants reserve the right to discuss these additional distinctions in a future Response or on Appeal, if appropriate. Applicants further respectfully submit that by not responding to additional statements made by the Examiner, Applicants do not acquiesce to the Examiner’s additional statements. The example distinctions discussed by Applicants are considered sufficient to overcome the Examiner’s rejections. In addition, Applicants reserve the right to pursue broader claims in this Application or through a continuation patent application. No new matter has been added.

I. Rejections Under 35 U.S.C. § 103(a)

Claims 1-7, 9-16, 18-25, and 27-30 stand rejected under 35 U.S.C. § 103(a) over *Jameson* in view of *Christensen*.

Applicants respectfully submit that Claims 1-7, 9-16, 18-25, and 27-30 contain unique and novel limitations that are not taught, suggested, or even hinted at in *Jameson* and *Christensen*, either individually or in combination. In addition, Applicants respectfully note that the Examiner has already acknowledged that *Jameson* fails to disclose “service level planning” and “replenishment

planning.” (7 January 2009 Final Office Action, page 11). Thus, Applicants respectfully traverse the Examiner’s obviousness rejection of Claims 1-7, 9-16, 18-25, and 27-30 under 35 U.S.C. § 103(a) over *Jameson* and *Christensen*, individually or in combination.

In rejecting Claim 1, the Examiner states:

Using the broadest reasonable interpretation, Jameson clearly teaches "decompositioning the supply chain planning problem into a plurality of independent sub-problems, said supply chain planning problem comprising at least one of a demand forecasting planning problem (col. 19, lines 1-45, uncertain future demand is a demand forecasting planning problem), a service level planning problem (col. 6, lines 46-61, meeting contractual obligations is a service level planning problem), and a replenishment planning problem" (col. 19, lines 1-45, determining capacity levels over time is a replenishment planning problem).

(19 June 2009 Office Action, page 3). Applicants respectfully disagree with the Examiner’s assertion that the broadest reasonable interpretation of a supply chain planning problem. In particular, Applicants respectfully direct the Examiner’s attention to the Office Action dated 7 January 2009 in which the Examiner acknowledges that *Jameson* fails to disclose “service level planning” and “replenishment planning.” (7 January 2009 Final Office Action, page 11).

Applicants further respectfully disagree with the Examiner’s assertion that the broadest reasonable interpretation of a “**service level planning problem**” is merely “meeting contractual obligations.” Rather, Applicants respectfully direct the Examiner’s attention to Applicants’ specification:

Service level planning is a method used to compute safety stock limits and ordering policies for items, based on customer service levels for the items and their future demand.

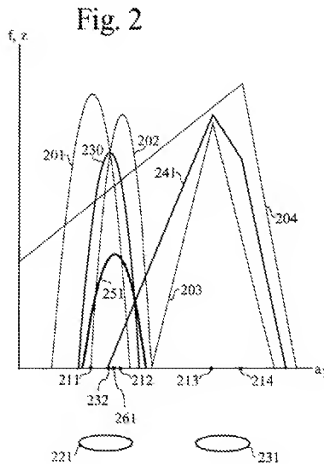
(Specification, Page 2, lines 8-11). By contrast, Applicants respectfully submit that the term “**service level planning problem**,” as shown above, is clearly defined in Applicants specification. In particular, as clearly shown above, Applicants specification recites that a “**service level planning problem**” computes “safety stock limits and ordering policies for items, based on customer service levels for the items and their future demand,” as opposed to *merely meeting contractual obligations*, as asserted by the Examiner. Therefore, the term “**service level planning problem**” is defined with such specificity as to render definite Applicants claims within the meaning of 35 U.S.C. § 112, second paragraph.

It is well-established that claims must be given their “broadest reasonable interpretation” in light of the specification. (see MPEP §2111). Specifically, an Examiner must interpret “verbiage of the proposed claims [in] the broadest reasonable meaning in their ordinary usage as they would be understood by one of ordinary skill in the art, *taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicant’s specification.*” (MPEP 2111, citing *In re Morris*, 127 F. 3d. 1048, 1054-55, 44 USPQ2d 1023, 1027-27 (Fed. Cir. 1997)). As noted above, the term “*service level planning problem*” is clearly defined and described within Applicants specification. In addition, as already acknowledged by the Examiner in the Office Action dated 7 January 2009 *Jameson* fails to disclose “service level planning.” (7 January 2009 Final Office Action, page 11). Thus, Applicants respectfully submit that the Examiner’s construction of the broadest reasonable interpretation of “*service level planning problem*” is inconsistent with Applicants specification and should be reconsidered and withdrawn.

Applicants further respectfully submit that *Jameson* fails to disclose “*solving each of said plurality of said independent sub-problems by each processor of said plurality of processors... wherein each processor of said plurality of processors is operating in parallel*” as required by Claim 1. Applicants respectfully direct the Examiner’s attention to column 7, line 66 through column 8, line 25 and Figure 2 of the specification of *Jameson*, provided below, on which the Examiner relies:

FIG. 2 depicts a hypothetical example with four scenarios. The a_1 allocations are shown collapsed into a single dimension on the horizontal axis; the vertical axis shows function f and z values. Curves 201, 202, 203, and 204 show f values as a function of a_1 for the first, second, third, and fourth scenarios respectively. The optimal a_1 values for the four scenarios are points 211, 212, 213, and 214. Given the four optimal points, they are clustered: points 211 and 212 into a cluster 221; points 213 and 214 into a cluster 231. (The clusters include the scenarios themselves.) The value of z across both the first and second scenarios is shown by curve 230; stated differently, curve 230 shows the probabilistically-weighted average value of curves 201 and 202. The value of z across the third and fourth scenarios by is shown by curve 241. For both clusters, the optimal individual-scenario allocations are good starting points for finding the optimal cluster allocations. Line-search techniques, to be explained shortly, are used to locate a point 232 as the optimal allocation for cluster 221. For cluster 231, however, the third scenario’s optimal allocation (point 213) is the best cluster allocation. Now, the iteration repeats: the two cluster allocations points 232 and 213 are clustered into a larger final cluster. The value of z across the four scenarios is shown by curve 251, and as analogous to using optimized scenario allocations, the optimal

allocations for the individual clusters serve as starting points for finding the overall optimal allocation, point 261.



Applicants respectfully submit that the Examiner’s interpretation of the above-referenced portion of *Jameson* as disclosing sub-problems being independently solved to determine an optimal allocation point is inaccurate. Rather, as shown above, *Jameson* discloses four scenarios of an allocation problem graphically depicted as functions. The optimal points of the function, 211, 212, 213, 214 are not values that have been arrived at by solving a sub-problem, but rather, are merely optimization points that are graphically depicted on the a_1 axis. ***Jameson is silent, and therefore fails to disclose, any discussion of solving a sub-problem for an optimal point.***

Rather, as shown above, *Jameson* states that “the optimal individual-scenario allocations are good starting points for finding the optimal cluster allocations. Line-search techniques... are used to locate a point 232 as the optimal allocation cluster.” Applicants respectfully submit that merely searching for an optimal cluster allocation from among existing cluster allocations does not equate to ***solving independent sub-problems*** as required by Applicants’ Claim 1. As such, *Jameson*’s disclosure of a searching technique for locating an optimal allocation cluster actually teaches away from Claim 1, which requires “***solving each of said plurality of said independent sub-problems*** by

each processor of said plurality of processors... wherein each processor of said plurality of processors is operating in parallel.”

As discussed in detail above, *Jameson* fails to disclose at least the limitations of Applicants’ Claim1 of “*decompositioning said supply chain planning problem into a plurality of independent sub-problems, said supply chain planning problem comprising a plurality of planning problems, at least one of said plurality of planning problems is a service level planning problem*” and “*solving each of said plurality of said independent sub-problems by each processor of said plurality of processors...wherein each processor of said plurality of processors is operating in parallel.*”

Christensen does not provide the missing teachings. Thus, Applicants respectfully submit that *Jameson* and *Christensen*, whether taken individually or in combination, fail to render Claim 1 obvious under 35 U.S.C. § 103. Accordingly, Applicants respectfully request that the rejections under 35 U.S.C. § 103 be withdrawn.

II. The Office Action Fails to Properly Establish a *Prima Facie* case of Obviousness According to the UPSTO Examination Guidelines

Applicants respectfully submit that the Office Action fails to properly establish a *prima facie* case of obviousness of Claims 1-7, 9-16, 18-25, and 27-30 over *Jameson* and *Christensen*, either individually or in combination. In particular, the Office Action fails to establish a *prima facie* case of obviousness based on the “Examination Guidelines for Determining Obviousness Under 35 U.S.C. § 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*” (the “Guidelines”).

As reiterated by the Supreme Court in *KSR International Co. v. Teleflex Inc.* (*KSR*), the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.* (383 U.S. 1, 148 USPQ 459 (1966)). Obviousness is a question of law based on underlying factual inquiries. These factual inquiries enunciated by the Court are as follows:

- (1) Determining the scope and content of the prior art;

- (2) Ascertaining the differences between the claimed invention and the prior art; and
- (3) Resolving the level of ordinary skill in the pertinent art.

(Notice, 72 Fed. Reg. 57527 (Oct. 10, 2007)). Objective evidence relevant to the issue of obviousness must be evaluated by Office personnel. (383 U.S. 17–18, 148 USPQ 467 (1966)). As stated by the Supreme Court in *KSR*, “While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.” (*KSR*, 550 U.S. at ___, 82 USPQ2d at 1391).

However, it is important to note that the Guidelines require that Office personnel “**ensure that the written record includes findings of fact** concerning the state of the art and the teachings of the references applied. (Notice, 72 Fed. Reg. 57527 (Oct. 10, 2007)). In addition, the Guidelines remind Office personnel that the “**factual findings made by Office personnel are the necessary underpinnings to establish obviousness.**” (*id.*). Further, “**Office personnel must provide an explanation to support an obviousness rejection** under 35 U.S.C. 103. (*id.*). In fact, “35 U.S.C. 132 requires that the applicant be notified of the reasons for the rejection of the claim so that he or she can decide how best to proceed” and “clearly setting forth findings of fact and the rationale(s) to support a rejection in an Office action leads to the prompt resolution of issues pertinent to patentability.” (*id.*).

With respect to the subject Application, the Office Action has not shown the **factual findings necessary to establish obviousness** or even **an explanation to support the obviousness rejection** of Claims 1-7, 9-16, 18-25, and 27-30 based on the proposed combination of *Jameson* and *Christensen*, either individually or in combination. The Office Action merely states that:

The inventions of Jameson and Christensen pertain to the analogous arts of database information storage and retrieval. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, as Christensen does not teach away from or contradict Jameson, but rather, teaches a function that was not addressed. The claimed invention is merely a combination of old and well-known elements, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention, as fig. 3 of Christensen shows how the database management system can be integrated with any client 28 computer.

(19 June 2009 Office Action, page 8). Applicants respectfully disagree and respectfully submit that the Examiner's conclusory statement is not sufficient to establish the *factual findings necessary to establish obviousness* and is not a sufficient *explanation to support the obviousness rejection* based on the proposed combination of *Jameson* and *Christensen*. *Applicants respectfully request that the Examiner provide proper support for the obviousness rejection under 35 U.S.C. 103 as necessitated by the Guidelines, including the factual findings necessary to establish obviousness to "ensure that the written record includes findings of fact concerning the state of the art and the teachings of the references applied.* (Notice, 72 Fed. Reg. 57527 (Oct. 10, 2007)).

The Guidelines further provide guidance to Office personnel in "determining the scope and content of the prior art" such as, for example, "Office personnel must first obtain a thorough understanding of the invention disclosed and claimed in the application." (Notice, 72 Fed. Reg. 57527 (Oct. 10, 2007)). The scope of the claimed invention must be clearly determined by giving the claims the "broadest reasonable interpretation consistent with the specification." (See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316, 75 USPQ2d 1321, 1329 (Fed. Cir. 2005) and MPEP § 2111.). In addition, the Guidelines state that any "*obviousness rejection should include*, either explicitly or implicitly in view of the prior art applied, *an indication of the level of ordinary skill.*" (Notice, 72 Fed. Reg. 57528 (Oct. 10, 2007)). With respect to the subject Application, the Office Action has not provided *an indication of the level of ordinary skill*. *Applicants respectfully request that the Examiner provide proper support for the obviousness rejection under 35 U.S.C. 103 as necessitated by the Guidelines, including an indication of the level of ordinary skill, relied upon by the Examiner.* (Notice, 72 Fed. Reg. 57527 (Oct. 10, 2007)).

The Guidelines still further provide that once the *Graham* factual inquiries are resolved, Office personnel must determine whether the claimed invention would have been obvious to one of ordinary skill in the art. (*Id.*). For example, the Guidelines state that *Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art.* (*Id.*). In addition, the Guidelines state that the proper analysis is *whether the claimed invention would have been obvious to one of ordinary skill in the art after consideration of all the facts.* (*Id.* and See 35 U.S.C. 103(a)).

With respect to the subject Application, the Office Action has not expressly resolved any of the *Graham* factual inquiries to determine whether Applicants invention would have been obvious to one of ordinary skill in the art. In addition, the Office Action fails to ***explain whatsoever why the difference(s) between the proposed combination of Jameson and Christensen, either individually or in combination and Applicants claimed invention would have been obvious to one of ordinary skill in the art.*** The Office Action merely states that “in order to increase the performance of the system, which is a goal of *Christensen*.” (19 June 2009 Office Action, page 8). Applicants respectfully disagree and further respectfully request clarification as to how this statement ***explains why the difference(s) between the proposed combination of Jameson, Christensen, and Applicants claimed invention would have been obvious to one of ordinary skill in the art.*** Applicants further respectfully submit that the Examiner is using the subject Application as a template to formulate reconstructive hindsight, which constitutes impermissible use of hindsight under 35 U.S.C. § 103(a).

The Guidelines yet further state that the “key to supporting any rejection under 35 U.S.C. 103 is the ***clear articulation of the reason(s) why the claimed invention would have been obvious.***” (Notice, 72 Fed. Reg. 57528 (Oct. 10, 2007)). In fact, the Supreme Court in *KSR* noted that “***the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit.***” (*id*). The Court quoting *In re Kahn* (441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)), stated that “[R]ejections on ***obviousness cannot be sustained by mere conclusory statements***; instead, there ***must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.***” (*KSR*, 550 U.S. at __, 82 USPQ2d at 1396). The Guidelines provide the following seven rationales:

- (A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- (E) “Obvious to try”—choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other

market forces if the variations would have been predictable to one of ordinary skill in the art;

- (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Applicants respectfully submit that the *Office Action fails to provide any articulation, let alone, clear articulation of the reasons why Applicants claimed invention would have been obvious*. For example, the *Examiner has not adequately supported the selection and combination of Jameson and Christensen to render obvious Applicants claimed invention*. As clearly shown above, the Examiner's unsupported conclusory statements *do not adequately provide clear articulation of the reasons why Applicants' claimed invention would have been obvious*. In addition, the Examiner's unsupported conclusory statement fails to meet any of the Guidelines' rationales to render obvious Applicants claimed invention. Thus, if the Examiner continues to maintain the obviousness rejection of Claims 1-7, 9-16, 18-25 and 27-30 based on the proposed combination of *Jameson and Christensen*, *Applicants respectfully request that the Examiner provide proper support for the obviousness rejection under 35 U.S.C. 103 as necessitated by the Guidelines, including a statement by the Examiner identifying which one of the seven rationales the Examiner is relying on and the proper analysis of that particular rationale, as required by the Guidelines*.

III. Applicants' Claims are Patentable over the proposed Jameson-Christensen Combination

Applicants respectfully submit that Claim 1 is considered patentably distinguishable over *Jameson and Christensen*. This being the case, Claims 9, 10, 18, 19, and 27 are also considered patentably distinguishable over *Jameson and Christensen*, for at least the reasons discussed above in connection with Claim 1.

Furthermore, with respect to dependent Claims 2-7, 11-16, 20-25, and 28-30: Claims 2-7 and 28 depend from Claim 1; Claims 11-16 and 29 depend from Claim 10; and Claims 20-25 and 30 depend from Claim 19. As mentioned above, each of Claims 1, 9, 10, 18, 19, and 27 are considered patentably distinguishable over *Jameson and Christensen*. Thus, dependent Claims 2-7,

11-16, 20-25, and 28-30 are considered to be in condition for allowance for at least the reason of depending from an allowable claim.

For at least the reasons set forth herein, Applicants respectfully submit that Claims 1-7, 9-16, 18-25, and 27-30 are not rendered obvious by *Jameson* and *Christensen*. Applicants further respectfully submit that Claims 1-7, 9-16, 18-25, and 27-30 are in condition for allowance. Thus, Applicants respectfully request that the rejection of Claims 1-7, 9-16, 18-25, and 27-30 under 35 U.S.C. § 103(a) be reconsidered and that Claims 1-7, 9-16, 18-25, and 27-30 be allowed.

CONCLUSION:

In view of the foregoing remarks, this application is considered to be in condition for allowance, and early reconsideration and a Notice of Allowance are earnestly solicited.

Although Applicants believe no fees are deemed to be necessary; the undersigned hereby authorizes the Director to charge any additional fees which may be required, or credit any overpayments, to **Deposit Account No. 500777**. If an extension of time is necessary for allowing this Response to be timely filed, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) to the extent necessary. Any fee required for such Petition for Extension of Time should be charged to **Deposit Account No. 500777**.

Please link this application to Customer No. 53184 so that its status may be checked via the PAIR System.

Respectfully submitted,

21 September 2009

Date

/Steven J. Laureanti/signed

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